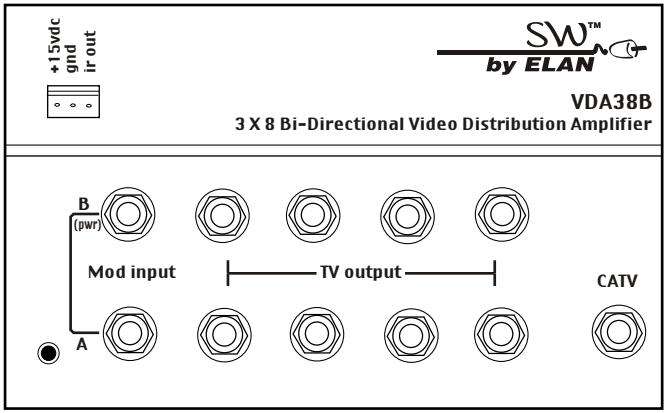
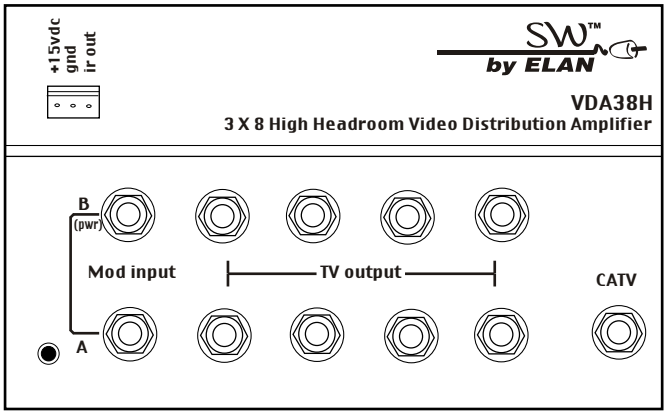
RF Distribution Amplifiers

VDA38B
VDA38H

STRUCTURED WIRING

by ELAN



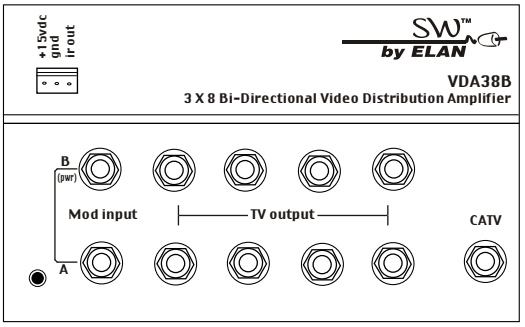


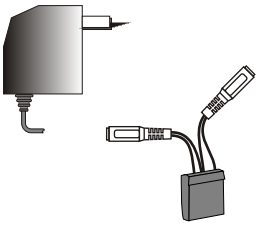
HOME SYSTEMS

Models VDA38B & VDA38H Video Distribution Amplifiers

The VDA38B or VDA38H is the heart of any RF distribution system. Each is a 3-IN by 8-OUT RF distribution amplifier that connects as many as 8 televisions to cable or antenna while maintaining optimum signal strength to all TVs. Each also has the capability of sending IR down each coax run for control of local TVs or video source components.

Contents: VDA38
Power Supply (15VDC @ 300mA)
Power/IR adaptor

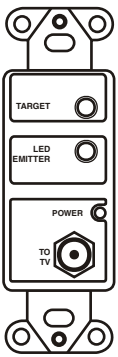




Model Differences:

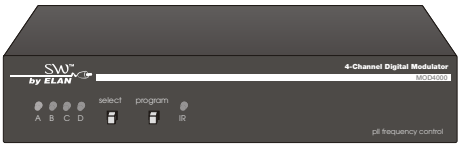
The VDA38H is for antenna or uni-directional cable systems and has the highest headroom of any coax panel available in the market.
The VDA38B is for bi-directional cable systems providing a 5-42MHz back channel for cable modems or interactive set-top boxes.

Accessories:



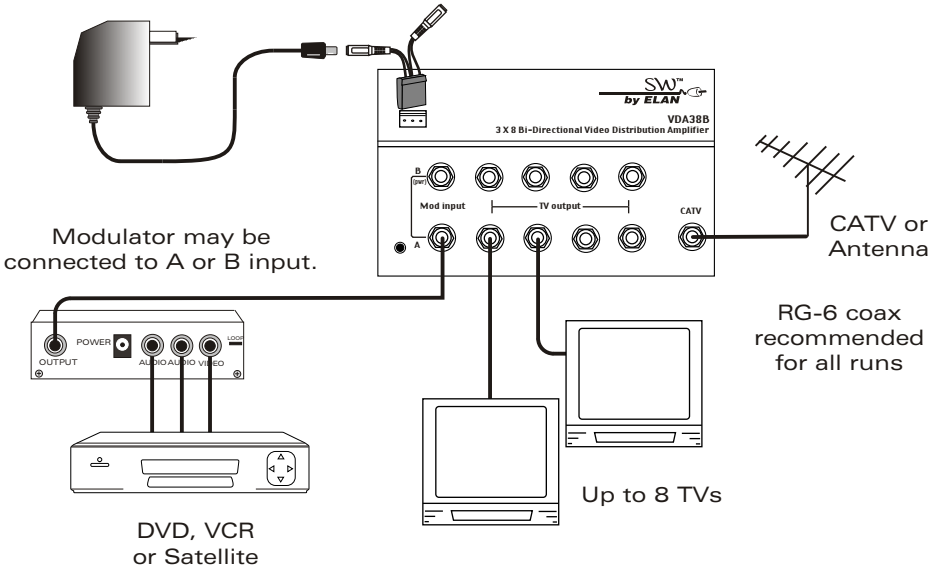
CXIRWP
COAX/IR wall plate breaks out the IR signal from the coax cable. Emitter jack for source control. Power supply included.
Powers the VDA38 remotely and has a built-in IR wall plate.
(fits standard Decora)

MOD4000 4-Channel Digital Modulator



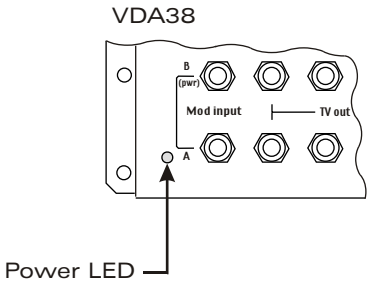
Typical Installation:

The VDA38 works like a zero-loss splitter. The signals you put on the antenna/CATV input will appear on the outputs with about 3dB of gain.

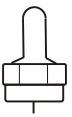


Circuit Breaker:

The VDA38 has a built-in circuit breaker. If the power LED is not lit, reset the circuit breaker by disconnecting and reconnecting the power supply. If the system does not reset, look for an installation error.



Note: Connecting a 75ohm terminator directly to an output of a VDA38 will cause the circuit breaker to trip.

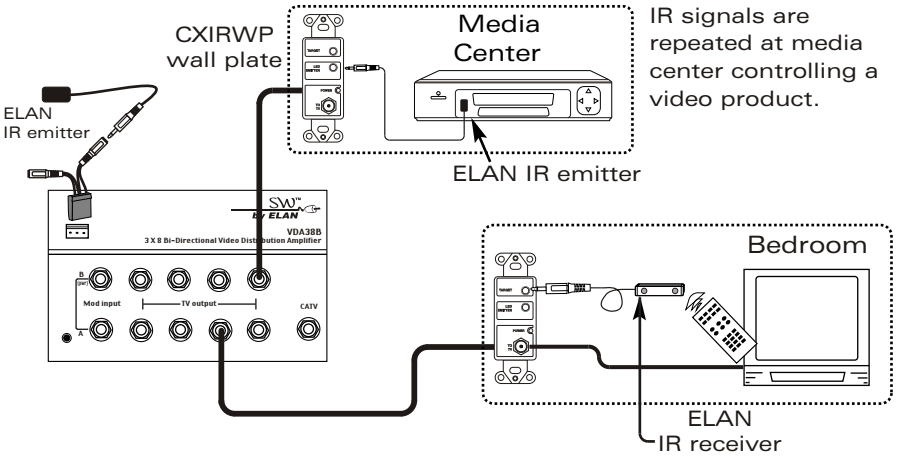


IR Repeating System:

With VDA38 you can also control your video components from any room in the house.

Any or all 8 outputs of a VDA38 may be connected to a CXIRWP wall plate. The CXIRWP breaks out the IR signal from the coaxial cable and features an input jack for an IR receiver and an output jack for an IR emitter (see the CXIRWP installation manual for further details).

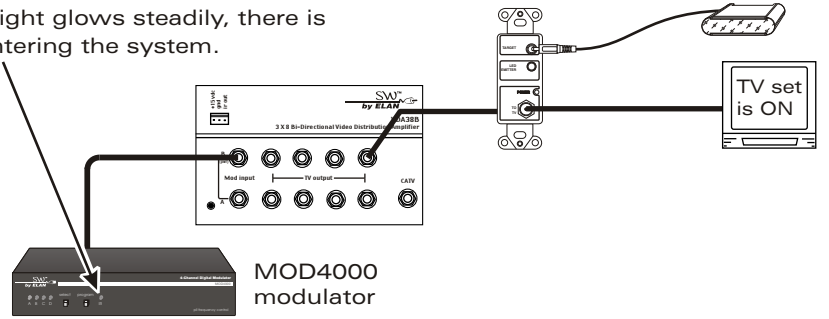
If the VDA38 happens to be located in the media center, an IR emitter may be connected directly to the VDA38 as shown below.



TV with IR receiver connected to a CXIRWP wall plate.

IR Troubleshooting

1) If IR light glows steadily, there is noise entering the system.



IR Troubleshooting (continued)

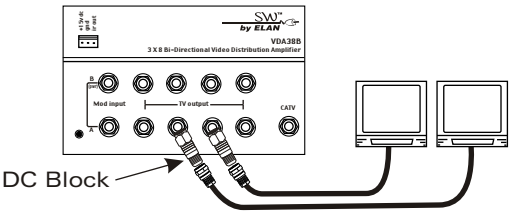
2) First disconnect the coax cables from all of the television output jacks. Find the source of the noise by re-connecting cables one at a time until the IR light glows. This identifies that coax as a noise source. Connect this noisy coax only for the next steps. Remember that there could be more than one source of noise, so you may need to repeat the following steps for each coax. Now step 3 will determine which type of noise problem you have.

3a) Optical noise. Cover the target with a towel. If the IR lights stops blinking, you have optical noise. The target may be pointed at a window, a fluorescent light or a plasma TV. Reposition the target so it can't "see" the source of IR light. If the IR light still glows, proceed to the next step.

3b) EMI noise: TV sets are sources of EMI, electromagnetic interference. Move the target away from the TV and try to reposition the target so the IR light stays off.

If the system trips the circuit breakers (IR systems only)

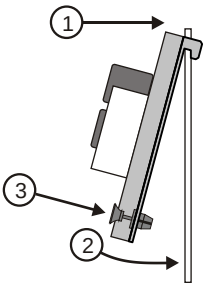
Using DC blocks. All output ports must be connected to a CXIRWP wall plate OR a DC block. If DC blocks are not used, the internal circuit breaker may trip to protect the system. (An output port that is not used will not trip the system and requires no DC block.)

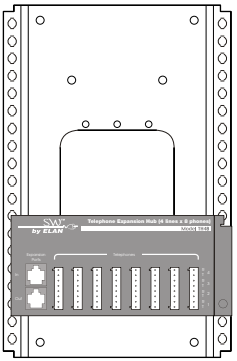


Use a DC block on all output ports that do not connect to a CXIRWP wall plate. (IR systems only)

ELAN modules attach from the top

1) Hook from the top
2) Swing into place
3) Push button to lock

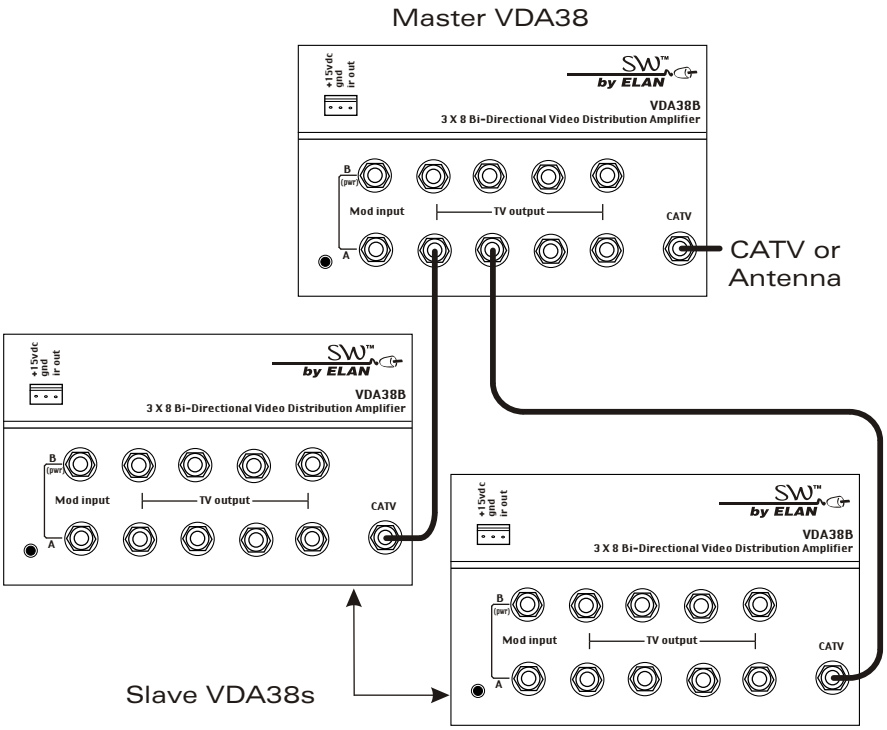




All ELAN modules are Open House™ grid compatible.

Expanding the VDA38:

You may connect up to 8 more VDA38s to the outputs of a master VDA38, for a total of 64 TV outlets. The longest recommended coax run should not exceed 150'. That is a total of the coax from master to slave and slave to TV.



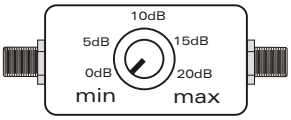
Each VDA38 must be powered individually. Each slave VDA38 can have local modulators and a zoned IR system for TVs connected to the eight outputs. Any modulator signals injected into a slave VDA38 will be viewable only on the eight TVs connected to it. Modulators connected to the master VDA38 will be viewable on all TV outputs including slave VDA38s.

Things To Watch For:

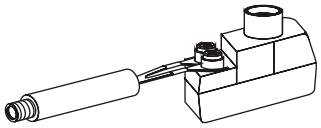
Herringbone interference on modulator channel (diagonal lines): You may have chosen a channel number that is not completely vacant. Distant UHF stations may not be watchable, but will cause interference if you try to create a new channel at the same frequency. Also, cable companies often have extra signals where there should be none. Try moving the modulator channel to another number. You may have to add a low pass filter to remove the cable company noise. If the filter does not work, try adding a DC-block to remove common mode interference.

Herringbone interference on many channels, including modulator channels (disappears when you remove the CATV/antenna feed): The RF amplifier can be overloaded by abnormally strong signals. Often, you can cure the problem with a simple attenuator. Use a variable attenuator and try to find a signal level where the interference just disappears. Sometimes, the problem is one station is far stronger than the rest. In this case, attenuating all of the signals with a simple attenuator will cause the desired stations to be weak (snowy). You must reduce the strength of the only offending station. A common FM trap will help if the problem is a nearby FM tower. If the problem is a nearby TV station, often the station management can provide suitable filters.

We recommend using only RG-6 coax when wiring a house for RF distribution. Why? Although good RG-59 has only slightly more loss than RG-6, it is harder to find a good RG-59 with wide bandwidth. RG-6 is a little more expensive and a little harder to run (it is thicker). But you will avoid surprises if you stick to RG-6.



Inexpensive variable attenuator



Inexpensive DC block for RF

Specifications:	VDA38H	VDA38B
Gain:		
CATV/Antenna port to output	3 dB	3 dB
Modulator input to output	-10 dB	-10 dB
Output to CATV (reverse) (5-42 MHz)	n/a	-15 dB
Isolation:	>80 dB	>35 dB
Modulator input to CATV/Ant	5-1000 MHz	54-1000 MHz fwd 5-42 MHz reverse
Max CATV/Antenna input:	20 dBmV (+80 dBµV)	20 dB mV (+80 dBµV)
Power Supply: (included)	15 VDC @ 300 mA	15 VDC @ 300 mA
General:		
Width x height x depth (in)	6.5” x 1.25” x 4.5”	
Shipping weight	4 lbs.	

Limited Warranty

ELAN HOME SYSTEMS, L.L.C. ("ELAN") warrants the VDA38B and VDA38H to be free from defects in materials and workmanship for a period of 5 years from the date of purchase. If within the applicable warranty period above purchaser discovers such item was not as warranted above and promptly notifies ELAN in writing, ELAN shall repair or replace the items at the company's option. This warranty shall not apply (a) to equipment not manufactured by ELAN, (b) to equipment which shall have been installed by other than an authorized ELAN installer, (c) to installed equipment which is not installed to ELAN's specifications, (d) to equipment which shall have been repaired or altered by others than ELAN, (e) to equipment which shall have been subjected to negligence, accident, or damage by circumstances beyond ELAN's control, including, but not limited to, lightning, flood, electrical surge, tornado, earthquake, or any other catastrophic events beyond ELAN's control, or to improper operation, maintenance or storage, or to other than normal use of service. With respect to equipment sold by, but not manufactured by ELAN, the warranty obligations of ELAN shall in all respects conform and be limited to the warranty actually extended to ELAN by its supplier. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation, or other expenses which may be incurred in connection with repair or replacement.

Except as may be expressly provided and authorized in writing by ELAN, ELAN shall not be subject to any other obligations or liabilities whatsoever with respect to equipment manufactured by ELAN or services rendered by ELAN.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER

FCC Requirements:

THIS PRODUCTS COMPLIES WITH FCC REQUIREMENTS. A SYSTEM USING THIS DEVICE WILL COMPLY WITH FCC REQUIREMENTS. USE ONLY VIDEO MODULATORS THAT COMPLY WITH PART 15 OF THE FCC RULES AND HAVE A 25dBmV MAX OUTPUT LEVEL. FAILURE TO DO SO MAY VOID THE USER'S AUTHORITY TO OPERATE THIS EQUIPMENT.

THE VDA38H IS SUITABLE FOR USE WITH AN ANTENNA OR WITH CATV SYSTEMS.

THE VDA38B IS SUITABLE FOR USE WITH CATV SYSTEMS.

ELAN Home Systems

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